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ABSTRACTS OF 28 RECENTLY COMPLETED STUDIES IN BUSINESS EDUCATION, PRIMARILY DOCTORAL DISSERTATIONS COMPLETED FROM 1960 THROUGH 1966, ARE ARRANGED BY THE FOLLOWING CATEGORIES —— (1) AUTOMATION, (2) BUSINESS EDUCATION PROGRAMS, WHICH INCLUDES ISSUES, GUIDANCE, AND AREAS IN NEED OF RESEARCH, (3) COOPERATIVE PROGRAMS, (4) EMPLOYMENT TRENDS, (5) EVALUATION, (6) IMPROVEMENT OF INSTRUCTION, AND (7) STUDENT CHARACTERISTICS. OFFICE EDUCATION, DISTRIBUTIVE EDUCATION, AND GENERAL BUSINESS EDUCATION STUDIES ARE INCLUDED WITHIN THE CATEGORIES CITED. (PS)



RESEARCH SUMMARIES

RESEARCH COORDINATING UNIT

• Vocational Education Section •

Business Education

CALIFORNIA STATE DEPARTMENT OF EDUCATION

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Business Education

Prepared by

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PREFACE

Business education is one of the most rapidly growing areas of vocational education, and such growth means that educators must make a large number of decisions concerning program implementation. Currently, one-third of the total labor force is composed of persons employed in business occupations, and the rate of increased expansion can reasonably be expected to continue. Because business education programs serve to prepare future members of such an expanding force, it becomes incumbent upon vocational educators to avail themselves of all reliable resource data.

This publication, which contains a limited number of abstracts of recently completed research in business education, was not intended to duplicate the information found in other summaries of research in business education. The abstracts have been arranged according to the following categories: automation, business education programs, cooperative programs, employment trends, evaluation, improvement of instruction, and student characteristics. Office education, distributive education, and general business education studies are included in these abstracts and will be found in the categories cited.

It is hoped that this publication will be of value to those persons responsible for program implementation in vocational business education.

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CONTENTS

														Page
PREFACE	•	•	•	•	•	•	•	•	•	•	•	•	•	iii
Automation	•		•	•	•	•	•	•	•	•	•	• .	•	1
Business Education Progra	.m	S	•	•	•	•	•	• •	•	•	•	• :	•	3
Cooperative Programs .	•	•	•	•	•	•	•	•	•	•	• .	•	•	6
Employment Trends	•	•	•	•	•	•	•		•	•	•	•	•	8
Evaluation	•	•	•	•	•	•	•	•	•	•	•	•	•	9
Improvement of Instruction	Į.	•		•	•		·.	•	•	•	•	•		11
Student Characteristics.	•			•		c.	•	•	٠.	•	٠	•	•	15
Selected References	•	•	•	• .			•	•		•	٠.	é	·• .	16



AUTOMATION

A report (Computer Technology, 1955) by Industrial Relations, Inc., focuses on the impact of the computer on industrial relations functions and on the process of management. Findings were as follows:

- 1. Much of the computer impact upon the white-collar employee is dependent upon the state of the organization prior to computerization and prior to the time the computerization is actually realized. The white-collar job after computerization resembles many blue-collar jobs.
- 2. Observed organizational changes are toward flatter organization and the recentralization of control.
- 3. An authoritarian bureaucracy is no longer in accord with our changing ideas of individual right and dignity. It suppresses initiative and innovation and is no longer competitively suitable to times of rapid change in products and technology.
- 4. The availability of simulation and symbolic models is creating opportunities to study the behavior of business firms in the following areas: decision-making, competition, business gaming, and market analysis (1965).

The U.S. Department of Labor (1966) did a study concerning the impact of office automation in the insurance industry. The following were the findings:

- 1. The use of computers in insurance is widespread.

 (80 per cent of all insurance companies have them).
- 2. EDP applications are extensive, tending toward integrated, computer-centered systems.



- 3. The growth rate of the office staff is declining in computerized companies.
- 4. EDP reduced the employment of punchcard tabulating machine operators, calculators, and routine clerical bookkeeping employees; three-quarters of the industry reported an employment decline.
- 5. The pace of the introduction of computers in the insurance industry grew radically in the period 1960-1962.

A study was made in 1964 to determine what direction business education might take toward providing instruction in automation and data processing. Findings:

- Automation, although proceeding at an accelerated pace in offices, has received little attention at the high school level.
- 2. Business education departments would be well-advised to offer a separate one-year course on automation at the twelfth year.
- 3. The senior level course on automation should include the following units: types of automated equipment, employment opportunities, orientation to data processing, automated equipment operation.
- 4. Useful skills include communication, problemsolving, and logical thinking (LaSalle, 1964).

Frisbie studied emerging electronic data processing and its relation to office employment and costs (Frisbie, 1961). The investigator calculated that the average capital investment in electronic data processing per clerical worker increased more than 6,700 per cent from 1951 to 1958. Industries employing the larger proportions of office employees -- manufacturing, federal government, insurance, public utilities, and banking -- constitute the leading



users of electronic equipment. Implications for training were as follows:

- Colleges should encourage the potential office manager, or other students with potential for supervision, to engage in programs of logical thinking and decision-making based upon quantitative data.
- Colleges should orient students in areas of current technological developments.
- 3. High schools should present business students with orientation to electronics, types of employment opportunities in this field, and the aptitudes needed for employment.
- 4. Local businesses should work with educational representatives.

BUSINESS EDUCATION PROGRAMS

In 1962, a study was made that was concerned with the identification and analysis of the major issues in selected business education subjects of the public secondary schools (Gratz, 1962). Data were obtained by questionnaire and interview, and the following issues were overwhelmingly articulated:

- 1. The public secondary school should continue to provide the minimum skills and knowledges necessary for initial job competency as an office worker in bookkeeping, clerical work, stenography and typing.
- 2. A general business education course should be required of all business students and available as an elective to all other students.
- 3. An office practice course should be offered in the business education curriculum.



4. Business education departments of colleges and universities should permit entering freshmen to enroll without having had any prior business instruction in the public secondary school.

The following issues were highly controversial, with lack of agreement on any one alternative:

- 1. Should business mathematics be offered as a separate course, integrated with bookkeeping, eliminated from the curriculum, or reorganized to include algebra and finite mathematics?
- 2. If a minority of students are employed in offices requiring the use of shorthand, should shorthand be dropped from the curriculum or continued to be offered in that particular high school? Should typewriting be required of all students? In which grades should personal-use typing be offered? Should advanced typewriting and office practice be combined and taught as one course?

Gilbert Farley (1961) did a study to determine the role of the community college in the preparation of the semiprofessional office worker. It was determined that the new community in Dade County (Greater Miami, Florida) has a role in the preparation of recent high school graduates for semiprofessional office workers. By use of a questionnaire, it was found that the five top-ranking skills required of the semiprofessional office worker were adding machine operation, composition of letters, typewriting, filing, and preparation of statistics.

A study was made in 1965 to analyze the business education programs of Kansas schools using the six pronouncements of the Policies Commission for Business and Economic Education issued in 1961 as the criteria. It was found that, excluding increased enrollments, the circumstances surrounding business education in 1962-63 were essentially those of the 1940's. The investigator believes that the Kansas public secondary schools have not a equately provided the students with essential kinds of preparation in business. He believes that all students should have the opportunity to develop foundational business understandings. Because of the variance in school size, essential leadership and supervision at the statewide level should be provided to ensure more uniform and purposeful business offerings. (Slaten, 1965).

A study was made concerning analysis, classification, and synthesis of research findings and thought on guidance in business education (Moriwaki, 1962). The investigator found that the business teacher's responsibility in the guidance program is to give guidance to students with regard to selection of course of study, future educational plans, occupational choices, and personal problems. Also, he utilized cumulative records and text scores to provide guidance for the students.

James Hallam (1965) conducted a study making recommendations regarding areas in business education needing research.

The findings of this study were:

- The primary area of business education in need of research is automation and data processing, specifically the curriculum and course content.
- 2. Secondary areas of business education in need of research are shorthand, teaching, typewriting, bookkeeping and accounting, guidance, curriculum and



course content, measurement and standards, and general business.

COOPERATIVE PROGRAMS

In 1965, an exploratory study was made on the effect of cooperative education programs in beginning occupations on selected employment factors (Robertson, 1965). Findings were as follows:

- Cooperative education did not appear to have any effect on the following job factors: satisfaction, performance, supervisory responsibilities, salary earned, stability, and aspirations.
- The work phase of cooperative education was not considered by this group to be primarily a learning experience.

Martin tried to determine the current status, practices, and problems of the cooperative office work experience programs that existed in the public high schools in the state (Martin, 1963). The majority of principals of New Jersey responding felt the cooperative office work experience program contributed to the school's objectives. nators were well-trained and received the support of the school administrators. These coordinators helped to improve school-community relationships by their contacts with businessmen. The participating businessmen overwhelmingly, believed the cooperative office work experience program was valuable in preparing high school students for an office career. The students, primarily, indicated the training in the program improved their work habits and inspired them to do better work. The investigator suggested that the office work experience program be expanded in New Jersey.

A study based on the hypothesis that there is a need for a program of cooperative vocational business education was made in the Salt Lake City high schools (Lowe, 1964). The need for ability to support a program of cooperative business education in those schools was evidenced by:

- The large number of jobless in Salt Lake City who refused employment because they lacked adequate vocational training.
- 2. The expressed desire of teachers of business education in the Salt Lake City schools for classes that provide on-the-job work experience for their students.
- 3. The Salt Lake City students who indicated they wanted on-the-job training and need help in securing part-time employment.
- 4. The large number of job openings in clerical and distributive occupations projected for the 1960's that will help provide employment for those who are trained.
- 5. The willingness of Salt Lake City business firms to hire high school students on a part-time basis while they are attending school.
- 6. The teachers of business education who are qualified and want to teach cooperative business subjects.
- 7. The ability of Salt Lake City business and industrial firms to hire high school students on a parttime basis thus providing clerical and distributive training stations.
- 8. The federal and state funds readily available to reimburse the schools for a substantial part of the cost of cooperative business and distributive classes.

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EMPLOYMENT TRENDS

Erwin (1963) conducted an investigation of business and industrial employment needs in relation to educational and vocational preparation in selected areas of Illinois. It was found that one of the major desires for prospective employees was the mastery of a skill along with a good general education background necessary to make effective Emphasis was placed on the provision of use of the skill. work experience in conjunction with specific vocational instruction to enable the students to apply and practice the skills and knowledge gained. It was believed that the holding power of schools in the area studied could be improved by organizing programs of study adapted to the needs and interests of students in relation to the needs of employers. Good high school vocational training as well as vocational training centers are desired.

A study was made in 1962 to determine the effect of social changes on present and future practices of education for business (accounting and office curricula only) in the public community colleges of Michigan. Findings indicated the following facts:

- The social, economic, and technical trends that were ranked highest were those that related directly or indirectly to the expansion or extension of education.
- 2. A gap exists between an awareness of trends on the part of business education personnel in the public community colleges in Michigan and the implementation of the trends into the business program.
- 3. Generally, few or no implications of current trends for the objectives and philosophy of business

- education programs were seen by business educators of the Michigan community colleges.
- 4. In general, the business education programs in the public community colleges in Michigan were not reflecting the changes taking place within the community and society as a whole (Poland, 1962).

EVALUATION

Wylie (1962) developed self-evaluative criteria for the evaluation of business education programs. The criteria were grouped according to nine categories: curriculum, instructional content; instructional activities; methods and procedures; instructional materials; guidance; extraclass activities; home, business, and community relations; physical facilities, equipment, and staff. The instrument was developed in the form of a check list and rating scale and was found by 21 business teachers to be highly effective for departmental evaluation.

Correlates of success in retail selling were studied by French (1960). Findings were as follows:

- 1. Occupational histories of high and low producers revealed that the former were reared in the homes of entrepreneurs and had opportunities to acquire a high level of aspiration for upward occupational mobility.
- 2. Men who were moving toward their goals tended to be high producers, while those who had attained their goals were the low producers.
- 3. Most of the high producers were in a dilemma; they held a job with high pay, but with little prestige in the group with which they associated or wished to associate.



4. High production depended upon one's willingness to violate norms.

A comparison was made of the achievement of high school pupils completing the Carter Briefhand with the achievement of high school students completing one and two semesters of Gregg Shorthand (Harper, 1965). It was found that:

- The difference between Gregg I and Briefhand was significantly in favor of the latter at 50, 60, and 70 w.p.m.
- 2. The difference between Gregg II and Briefhand was significant at 60, 70, 80, 90, and 100 w.p.m. in favor of Gregg II.

It was recommended that for pupils planning one semester of shorthand, the Briefhand course is of more value. For those desiring two semesters, Gregg would provide a higher level of achievement.

A study was made to determine what effect vocational office-training had on career patterns of former students (Braden, 1964). Findings showed four distinct career patterns emerging:

- 1. Stable -- enters and experiences upward mobility.
- 2. <u>Dead-end</u> -- enters and remains at level or experiences downward mobility.
- 3. <u>Unstable</u> -- enters and holds several jobs at about the same skill level and then leaves for other employment.
- 4. Temporary -- enters at low level and leaves the labor market after short time (less than one year) and remains off labor market for six years.

Additional findings showed that employees with vocational office training felt prepared for work, obtained



high-level entering and ending jobs, and were identified as having experienced stable beginning career patterns.

IMPROVEMENT OF INSTRUCTION

Nelson, Little and King (1962) attempted to determine whether interest value of copy material for typewriting affects typing speed and/or accuracy. Findings were that:

- 1. The mean gross w.p.m. on both interesting and uninteresting material was 31.76. The mean number of errors for interesting material was 4.29; for uninteresting material, it was 4.61. The obtained value for the difference between means was .74 (1 per cent).
- There was no significant difference in speed or accuracy of typewriting on interesting or uninteresting copy.

A study was made to identify the basic skills needed with adding and calculating machines for office positions, with implications for improvement of instruction of office machines (Chase, 1965). Findings were as follows:

- Positive relationships were established between employability and the following:
 - a. Number of hours of classroom instruction.
 - b. Types of institutions in which instruction was received.
 - c. Work experience with the specific office machine.
 - d. Number of years of work experience.
 - e. Employee's employment stature after two months on the job.



- 2. Ratings of the performance of the participants who had more office experience were no higher than the ratings of those who had less experience.
- 3. There appeared to be a relationship between office machine work experience and the basic skills needed by operators -- office machines.

A study was made in 1965 to determine the effectiveness of the use of the Diatype as an instructional device in developing speed and accuracy in first-year typewriting (Shell, 1965). Finding were as follows:

- 1. The use of the Diatype was found to be an effective means of developing greater speed in the first-year typing program.
- The use of the Diatype as an effective means of developing greater accuracy in typing was not established.
- 3. The Diatype can be used as an effective device for diagnosing common typing irregularities such as difficult letter combinations, awkward reaches to punctuation markings, slowness in operating the space bar, and erratic rhythm.

George Grill (1965) attempted to determine what evidence exists concerning digit and symbol patterns in selected types of business communications. Findings were as follows:

- The position of the <u>O</u> key should be changed to a more strategic location near the center of the top row, enabling the use of a stronger finger.
- Digits, alphabetic symbols, and non-alphabetic symbols occurring most frequently should be practiced extensively by the students.



- 3. Statistical typing for vocational purposes should include methods for developing and maintaining a mastery of the digit and symbol keys.
- 4. Teacher-directed practice in the development of digit and symbol control should be incorporated in the daily typewriting instructional program.

Ninety post-secondary school typewriting students, representing three speed levels, were tested on straight copy, typed on an electric typewriter with a rhythm machine attachment (Nellermae, 1965). Stroking patterns existed at each of three speed levels, but the typists did not type as a group within each speed level. Speed groups tended to vary less within a group as they became more expert typists. All groups were found to have a tendency to recreate two and three-stroke words within their group on successive repetitions. Words longer than two or three strokes did not appear to be recreated on successive occurrences.

A comprehensive study of research findings and thought in professional literature pertaining to the area of office practice in instruction for the period 1951-1959 was done by Prewitt (1961). It was found that since its inception in 1898, office practice instruction has expanded in scope. Component parts of office practice are secretarial practice, clerical practice, and office machines instruction. tarial practice is designed for students with the ability to take and transcribe shorthand notes. Instruction in office machines is considered "care" instruction for secretarial and clerical practice. Clerical practice received more attention in both research and nonresearch literature than did any other aspect of the office practice program during the period of time covered by this study. This study should be helpful to curriculum builders in



constructing courses of study and for initiating an office practice program.)

Elbing (1962) investigated the influence of an individual's reference group identification on his role-playing effectiveness in a business situation. The results of the study strongly indicated the proposition that reference group identification influences role-playing effectiveness. Subjects assigned to play or observe a role compatible with the norms of their reference group reacted more favorably to the role-playing than did subjects assigned roles incompatible with their reference group norms. There was no significant variation within the control group. Change in attitude following role-playing was related to the relationship of the designited role to the subjects prior position on the issue. Observers requested to view the role-playing from one point of view were found to have as favorable feelings toward the role-playing experience as players but were more apt to entrench rather than modify their previous point of view as a result of the role-playing.

A study was made comparing training new life insurance salesmen by use of a conventional text and by use of programmed material (Hedberg, Raymond, and others, 1965). It was found that the programmed text required substantially less trainee and trainer time. However, the programmed text did not seem to lead to a greater amount of absolute learning. The programmed group did show more knowledge gained per hour of training time. Trainers and trainees strongly preferred the programmed text.

STUDENT CHARACTERISTICS

White (1963) tried to determine the relationship between typing performance and measured mental ability. The following findings resulted:

- 1. First-year grade average is significantly related (5 per cent) to the final typing grade.
- Typing speed is significantly related to the total typing test score (1 per cent) and the final typing grade.
- 3. Factors in the Primary Mental Abilities Test which
 are correlated with typing grade are: Space
 (r = .52); Number (r = .47); Word Fluency
 (r = .76); and General Intelligence (r = .47).
- 4. The Scientific Interest Scale, the ability to discover new facts and to solve problems, is the only interest scale significantly related to the final typing grade (r = .56 at 1 per cent).

In 1965, a study was made to investigate relationships between general attitudes toward work and objective measures of job performance (Kirchner, 1965). The greatest relationship between any attitude area and actual job performance is that between general attitudes toward work and sales points and total points produced. Favorable job performance and favorable job attitudes tended to correlate quite positively. Favorable attitudes toward supervision and toward working conditions were associated with better job performance. Favorable attitudes toward one aspect of work were usually associated with attitudes toward other aspects. Attitudes toward supervision were directly related to production on the job.



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ERIC

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